



OFFICE MEMORANDUM

DATE: August 19, 1997

TO: District Engineers
District Field Engineers
District Soils & Materials Engineers
District Materials Supervisors
Resident/Project Engineers
District Construction Engineers
TSC Managers

FROM: James D. Culp
Engineer of Construction and Technology

SUBJECT: CONSTRUCTION AND TECHNOLOGY INSTRUCTIONAL
MEMORANDUM # 1997-6
Inspection and Control of Small Quantities of Concrete

Use the information in this letter as a criteria to inspect, document, and control small quantities of concrete. "Small quantities" are defined as daily production of less than 40 cubic meters.

Exposed Concrete Items

The following items may be accepted on the basis of conventional field testing (slump, air, and strength). Intermittent plant observation will be required, as established by the engineer.

- A. Curb and gutter, valley gutter, and sidewalk
- B. Concrete dividers, medians, glare screens, and filler walls
- C. Culvert headwalls, spillways, and paved ditches
- D. Non-production base course
- E. Slope paving and headers
- F. Temporary pavements and non-production pavement patching
- G. Vertical sign and light standard foundations

Batch weights are to be set up from an MDOT approved mix-design chart. The concrete delivery tickets will contain the same information required for production projects, including certification that the materials used in the concrete are State tested or certified as meeting specification requirements. A National Ready Mixed Concrete Association certified plant should be used if available, or a plant approved by the department.

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Yield checks are optional. Overruns may be expected with small pours; therefore, the yield checks may not provide correlative information.

Documentation: The individual pours may be summarized on Form 1174, Daily Report of Concrete Proportioning, and submitted weekly or more frequently as judgement dictates. The report is intended to be a source document and history that will provide information on slump, air, etc., in the event the pour should develop some deficiency. Form 1174 should have the wording "Random Plant Inspection" printed in a prominent place to indicate that continuous plant observation and inspection was not observed. Pay quantities should be reported on the Inspector's Daily Report (Form 1122).

All specification requirements still apply to these items. However, when necessary, the engineer may waive the above mentioned requirements, no more than two occurrences per project, per pay item, if the following procedure is followed:

Testing of air, slump and strength must be performed, at least once, per mix design, per project. The engineer shall state in a memo to the project file the mix-design, the applicable test, the affected pay items, the associated quantities and dates the waiver applies, and the reason for granting a waiver.

Non-exposed Concrete Items

Concrete without plant inspection and with limited field testing, as approved by the engineer, may be used for the following unexposed concrete items:

- A. Manhole, catch basin, and inlet foundations
- B. Sign, signal, and light bases
- C. Fence post and guard rail anchors
- D. Duct and sewer encasement
- E. Floors for buildings
- F. Thrust blocks
- G. Other unexposed items designated in plans or proposal, such as seal coats o r
subfootings

All substructure concrete above subfooting and water main encasement are not to be considered in this category, but must have complete reporting and inspection.

Documentation: The Daily Report of Concrete Proportioning, Form 1174, will not be required, but pay quantities will be reported on the Inspector's Daily Report, Form 1122. Beams/cylinders, when made, should be reported on the proper report forms and submitted after strength determination is completed. Concrete delivery tickets are to state the cement content per cubic meter.

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Again, as stated above, all specifications still apply to these items. However, when necessary, the engineer may waive the above mentioned requirements, no more than two occurrences per project, per pay item, if the items are visually inspected and the proper documentation is placed in the project file.

If you have any questions, contact John LaVoy at 517-335-2244, or Jeff Grossklaus at 517-335-2242 of the Construction and Technology Division.

JC:JTL:JG:dg

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